

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicants:

M. Rigdon Lentz

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Serial No.:

09/709,045

Art Unit:

1647

TECH CENTER 1600/2900

Filed:

November 10, 2000

Examiner:

J. Seharaseyon

For:

METHOD AND SYSTEM TO REMOVE CYTOKINE INHIBITOR IN PATIENTS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

# SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §1.56 and 37 C.F.R. §1.97, Applicant submits a Supplemental Information Disclosure Statement, including two (2) pages of Form PTO-1449 and copies of the twenty-two (22) documents cited therein.

Enclosed is a check for \$180.00 representing the fee required under 37 C.F.R. §1.17(p) for an Information Disclosure Statement filed after a first Office Action on the merits under 37 C.F.R. §1.97(c). It is believed that no additional fees are required with this submission. However, should an additional fee be required, the Commissioner is hereby authorized to charge any fees to Deposit Account No. 50-1868.

U.S. Patents

Issue Date	<u>Patentee</u>	01 FC:1806	Class/Subclass	180.88 OP
12-04-1984	Bier		204/180	109.99 (h
09-04-1996	Okarma, et	t al.	424/489	

19/88/2603 MROCHA1 00008907 09789845

Number

4,486,282

5,523,096

5,679,260

5,861,483

U.S.S.N.:

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INFORMATION DISCLOSURE STATEMENT

5,919,898	07-06-1999	Nakatani, et al.	530/345
5,980,887	11-09-1999	Isner, et al.	424/93.7
6,017,527	01-25-2000	Maraskovsky, et al.	424/93.71
6,231,536	05-15-2001	Lentz	604/5.04

### **Foreign Documents**

Number	Publication Date	Patentee	Country
43 45 200	12-22-1994	Fresenius AG	DE
196 24 250	01-02-1998	Ahrenholz, et al.	DE
WO 91/09967	07-11-1991	Celltech Limited	PCT
WO 01/37873	05-31-2001	Lentz	PCT

### **Publications**

ADERKA, et al., "Increased serum levels of soluble receptors for tumor necrosis factor in cancer patients," *Cancer Res.* 51: 5602-5607 (1991).

AMIT, et al., "Three-dimensional structure of an antigen-antibody complex at 2.8 resolution," *Science* 233: 747-751 (1986).

DIGEL, et al., "High levels of circulating soluble receptors for tumor necrosis factor in hairy cell leukemia and type B chronic lymphocytic leukemia," *J. Clin. Invest* 89: 1690-1693 (1992).

ELSÄSSER-BEILE, et al., "Increased plasma concentrations for type I and II tumor necrosis factor receptors and IL-2 receptors in cancer patients," *Tumor Biol.* 15: 17-24 (1993).

KESSLER, "Adsorptive plasma treatment: optimization of extracorporeal devices and systems," *Blood Purif.* 11: 150-157 (1993).

LENTZ, et al., "Low molecular weight protein apheresis and regression of breast cancer," *Jpn. J. Apheresis* 16(1): 107-114 (1997).

PANKA, et al., "Variable region framework differences result in decreased or increased affinity of variant anti-digoxin antibodies," *Proc. Natl. Acad. Sci. USA* 85: 3080-3084 (1988).

RUDIKOFF, et al., "Single amino acid substitution altering antigen-binding specificity," *Immunology* 79: 1979-1983 (1982).

SELINSKY & HOWELL, "Soluble tumor necrosis factor receptor type I enhances tumor development and persistence *in vivo*," *Cell. Immunol.* 200: 81-87 (2000).

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SELINSKY, "Dissertation: The role of soluble tumor necrosis factor type I in tumor survival," Colorado State University, Fort Collins, Colorado (1999).

#### Remarks

This statement should not be interpreted as a representation that an exhaustive search has been conducted or that no better art exists. Moreover, Applicant invites the Examiner to make an independent evaluation of the cited art to determine its relevance to the subject matter of the present application. Applicant is of the opinion that his claims patentably distinguish over the art referred to herein, either alone or in combination.

Respectfully submitted,

Patrea L. Pabst

Reg. No. 31,284

Dated: October 2, 2003

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INFORMATION DISCLOSURE STATEMENT

Certificate of Mailing under 37 C.F.R. § 1.8(a)

I hereby certify that this Information Disclosure Statement, along with any paper referred to as being attached or enclosed, is being deposited with the United States Postal Service on the date shown below with sufficient postage as first-class mail in an envelope addressed to the Assistant Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date:

October 2, 2003

Peggy Bailey

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

of

Complete if Known

Application Number 09/709,045

Filing Date November 10, 2000

First Named Inventor M. Rigdon Lentz

Group Art Unit 1647

Examiner Name J. Seharaseyon

LEN 102

	U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No.1	US Patent Document	Name of Patentee or Applicant of Cited Document	Date of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
		Number Kind Code <sup>2</sup> (if known)					
		4,486,282	Bier	12-04-1984			
		5,523,096	Okarma, et al.	09-04-1996			
		5,679,260	Boos, et al.	10-21-1997			
		5,861,483	Wolpe	01-19-1999			
		5,919,898	Nakatani, et al.	07-06-1999			
		5,980,887	Isner, et al.	11-09-1999			
		6,017,527	Maraskovsky, et al.	01-25-2000			
		6,231,536	Lentz	05-15-2001			
				<u> </u>			

Attorney Docket Number

				F	OREIGN PATENT DOCUMEN	TS		
Examiner Initials*	Cite No.1	Foreign Patent Document		1	Date of Publication of Cited Document MM- DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T	
		Office.3	Number⁴	Kind Code <sup>5</sup> (if known)				
		DE	43 45 200		Fresenius AG	12-22-1994		
		DE	196 24 250		Ahrenholz, et al.	01-02-1998		
		PCT	WO 91/09967		Celltech Limited	07-11-1991		
		PCT	WO 01/37873		Lentz	05-31-2001		

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Examine	Date Considere	1
Signature		

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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant to place a check mark here if English language Translation is attached.

J. Seharaseyon

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Application Number

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Filling Date
First Named Inventor

Group Art Unit

1647

Examiner Name Attorney Docket Number

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of

VRA	DEM		
		OTHER ART NON PATENT LITERATURE DOCUMENTS	
Examiner's Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T²
		ADERKA, et al., "Increased serum levels of soluble receptors for tumor necrosis factor in cancer patients," Cancer Res. 51: 5602-5607 (1991).	
		AMIT, et al., "Three-dimensional structure of an antigen-antibody complex at 2.8 resolution," <i>Science</i> 233: 747-751 (1986).	
		DIGEL, et al., "High levels of circulating soluble receptors for tumor necrosis factor in hairy cell leukemia and type B chronic lymphocytic leukemia," <i>J. Clin. Invest</i> 89: 1690-1693 (1992).	
		ELSÄSSER-BEILE, et al., "Increased plasma concentrations for type I and II tumor necrosis factor receptors and IL-2 receptors in cancer patients," <i>Tumor Biol.</i> 15: 17-24 (1993).	
		KESSLER, "Adsorptive plasma treatment: optimization of extracorporeal devices and systems," <i>Blood Purif.</i> 11: 150-157 (1993).	
		LENTZ, et al., "Low molecular weight protein apheresis and regression of breast cancer," <i>Jpn. J. Apheresis</i> 16(1): 107-114 (1997).	
		PANKA, et al., "Variable region framework differences result in decreased or increased affinity of variant anti- digoxin antibodies," <i>Proc. Natl. Acad. Sci. USA</i> 85: 3080-3084 (1988).	
		RUDIKOFF, et al., "Single amino acid substitution altering antigen-binding specificity," <i>Immunology</i> 79: 1979-1983 (1982).	
		SELINSKY & HOWELL, "Soluble tumor necrosis factor receptor type I enhances tumor development and persistence <i>in vivo</i> ," <i>Cell. Immunol.</i> 200: 81-87 (2000).	
		SELINSKY, "Dissertation: The role of soluble tumor necrosis factor type I in tumor survival," Colorado State University, Fort Collins, Colorado (1999).	
	L		

Examiner's	" "	Date Considered	
Signature			

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